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RESPIRATION SUBSERVIENT TO NUTRITION.

[Concluded from page 485.]

RESPIRATION, therefore, does not merely supply a necessary condition of vital action; it does not merely remove out of the way a pernicious substance; but it exerts a direct and positive influence of the most important character upon the vital fluid and the living tissues, indispensable to their perfection and vitality, and thus it is a direct, positive source of life and power to the organism.

This view of respiration gives a higher sanction, than has ever yet been given, to some of the most important principles of hygiene and therapeutics, and can hardly fail to give a new impulse to their practical application. It may also shed some light upon certain pathological conditions of the human system.

The value of pure air in connection with the preservation of health is universally acknowledged. Free ventilation, and exercise in the fresh morning air, are abundantly insisted on; but it has been rather with a view to the removal of deleterious gases, or noxious exhalations, and to obtaining the exhilarating and tonic impression of the fresh cool air upon the nervous system, or from a general and vague impression derived from experience of its beneficial effects, than from any idea of the necessity of a full supply of oxygen to the very *formation* of the nutrient material upon which life and health every moment depend, and to the maintenance of healthy vital energy in all the living tissues. The importance of pure air free from all noxious admixture, and of the healthful tonic influence of the fresh breezes of the morning, of the fields, and of the sea-shore, is not exaggerated. Their value can hardly be overestimated. But if we add to this the fact, that pure air furnishes the very materials out of which life and health are built up, that it has a direct, positive, indispensable part to act in those vital processes, by which they are every moment maintained, then we have something tangible, impressive, directly addressed to the reason, carrying full conviction to the mind, that an abundant supply of pure air is necessary to supply the positive and urgent, and constant demands of the vital organs for oxygen to enable them to maintain a healthy vital action; that such a supply of pure air is needed, not only in the cool of the morning, on the hill-top, and at the sea-shore, but that everywhere and at every moment

the very wheels of health and life are dependent upon it as the element that supplies the very forces which maintain their movement.

This view of respiration may also shed light upon some important points in pathology. I refer particularly to those scrofulous and cachectic conditions of the system, in which abnormal deposits or malignant growths occur, or in which the reparation of the tissues is retarded or prevented, or their destruction is going on. In addition to the influence of former disease and irregularities, of hereditary tendencies, of unhealthy food, of uncleanliness, of exposure to hardships and privations, of inaction and confinement, of mental dejection and passion, &c., the influence of bad air and imperfect ventilation in producing and aggravating these diseased conditions is well known. And if instead of a vague notion of poisonous gases and unhealthy exhalations, and general depression of the vital powers, we are able to substitute the more definite idea of a direct deficiency of an element most essential to the perfect elaboration of the material supplied to the tissues for assimilation, we certainly approach nearer to a comprehension of these pathological phenomena. If we can once but know that a deficiency of pure air renders it impossible for the nutrient fluid to be perfectly prepared for the wants of the system, that on this account it fails to be formed into a perfectly plastic material, then, in this cacoplastic substance offered to the tissues for assimilation, we see one important cause of those abnormal deposits which not only prove insufficient for the purposes of the vital economy, but are often so destructive to its health and life. Here the value of pure air for respiration to all who would avoid or check such diseased tendencies in the system appears in a new and striking light, placing before all such persons a most powerful and urgent motive to secure for themselves constantly a good and abundant supply of this indispensable element of perfect nutrition.

But above all, this view of the function of respiration shows in a new and clearer light, how indispensable to the physician, as a means of cure, is a constant supply of pure air to his patient. It even suggests the inquiry whether the inhalation of a more highly oxygenated air may not be of great service in some cases. It is not improbable that, since the inhalation of ether has exerted so potent an influence, and has proved such an inestimable blessing to suffering humanity, the virtues of other gases applied in the same way to the respiratory organs may also be tested. Dr. Beddoes's inhalations of vital air, which many years ago were represented as rendering such effectual aid in the cure of certain diseases, may now be repeated with the most valuable results.

But however this may be, the value of pure air to the sick as well as to the healthy, will not be denied. Indeed, it is to some extent insisted on, though there is reason to fear that it is less regarded in the private chamber of sickness than in public institutions. In our Hospital* its importance is acknowledged; the valuable results are clearly seen. It is probably as much owing to the good ventilation of this institution as to any other cause, that the type of disease generally exhibits such a decided improvement immediately after the admission of the patient.

That such must necessarily be the result, from the very nature of the

* Mass. General Hospital, Boston.

case, is evident, when we consider the important office assigned to respiration in the vital economy. If diseases are to a great extent self-limited: if there are few specifics in medicine: if we cannot drive the elements of disease from the system, by our drugs; if we must rely mainly upon the vital powers themselves as exerted in the various organic functions; if by promoting the free, healthy, unobstructed exercise of these functions in all cases we can best aid nature in her work of the restoration of health; if a constant supply of perfectly elaborated nutrient material is necessary to maintain those vital processes by which she does this great work; then it is indispensably necessary that the agent which God has provided to perfect this elaboration of the blood, should be constantly supplied to the patient in free, full draughts of the pure air of heaven. It is especially wrong to withhold from nature full supplies of force and natural stimulus in the very hour of her necessity, when all her powers are tasked to the utmost in the struggle to throw off disease. The evil effects of such privation are as natural as they are obvious, and the happy results witnessed at our hospital, when this vital element in its purity is readmitted to the lungs of the sick man, are in strict accordance with the laws of life.

The paramount importance of pure air in sickness as well as in health might be inferred from its universal diffusion. The most valuable gifts of God to man are the most common, though, too often, least highly prized. Iron is of more value than gold; coal is worth more than diamonds; and the dirty despised soil of our fields and pastures is worth more to man than all the produce of the mines. Wheat is of more value to us than the most rare and luscious fruits; water has virtues far surpassing those of the choicest wines. But more precious still is the pure ethereal element, and being so, it is more lavishly bestowed by the bounty of providence than all the rest. Everything else, even water itself, though placed within our reach, can be obtained only by exertion on our part; but this is poured out upon us, and made to flow all around us, and within us, by the hand of God himself without any effort of our own. In it we live, and move, and have our being. Everything else we can dispense with for minutes, for hours, even for days, but this we must have every moment or we die.

In such infinite profusion of this great gift to humanity, and in its importance to our very existence, there is a deep significance. Here is a lesson, not for the moralist alone, but for the physician—a lesson which he should make haste to learn, fraught as it is with instruction from the lips of infinite wisdom. The Creator of the human frame having thus shown us his estimate of the comparative value of this great agent in maintaining those vital functions by which the life and health of the organs are preserved or restored, we should make full and free use of what he has thus revealed to us as nature's grand restorative.

In speaking thus strongly of the supreme importance of this agent as a means of cure, I would not be understood to undervalue other remedial agents. On the contrary, I would place a higher estimate upon the ordinary medicinal agents than is now generally accorded to them. In this city, at least, it seems to me that the pendulum of professional opi-

nion is swinging to the extreme of too little confidence in the power of medicines. Many of those agents which we draw from the animal, the vegetable and the mineral kingdoms, have great power over the functions upon which life and health depend, stimulating, moderating, sustaining, invigorating, modifying, and even altering them, to a very remarkable degree. Some of them seem to have even a specific control of certain diseases. It is not that I prize these less, but that I value pure air more. Yet some, even of our best physicians, seem practically to overlook its importance. They are too often satisfied with a correct diagnosis, and a judicious prescription, leaving the patient to struggle on in the confined air of his chamber at the discretion of his nurse, or with a passing remark that "it would be well to have more air;" not insisting upon this latter as an all-important thing that must not be neglected, but must be fully and faithfully attended to. I would not object to the most heroic remedies when they are indicated. In certain cases the physician should be a very knight-errant of medical chivalry. Yet even in such cases, nature's indications with regard to pure air would never be forgotten.

But especially in those more protracted struggles of nature with her enemies, when her powers fail, when she is languishing and exhausted, should the physician secure the full and unceasing action of that great agent, which divine Wisdom has prescribed and which the divine Hand itself administers. Too often, when the exhausted powers of the system cry out to the physician for that wholesome aliment which can furnish sustenance to their wasting energies, he gives them that which can afford them no nutriment; when they ask for bread to minister to their nutrition, he gives them a stone to oppress them. Too often, when they beseech of him to allow free access to that living, life-giving element upon which their vitality depends, he offers them only some pain-giving, poisonous, blistering agent; when they "ask for an egg he gives them a scorpion." But the physician should always freely give the pure breath of heaven to struggling nature when she pants for it. At no time should its value to the sick man be forgotten; at no time should it be left to the carelessness of the nurse, or the foolish prejudices of friends. The physician should feel the weight of this responsibility as resting upon himself, and see to it that this chief of all the restorative agents of nature is faithfully employed. And at those times, when languid and exhausted nature more especially needs its aid, to strengthen and quicken her for a more successful struggle, should he insist, with an energy that will command obedience, that it have free access to his patient fresh from its native skies.

In nature's great extremities, when her powers flag in the swoon, or ebb away at the approach of death, we instinctively throw open the door or window, or carry the sufferer to the open air that he may feel its reviving influence. Here unerring instinct teaches, when reason fails Why not do the same when the powers are more slowly flagging, and life is more slowly ebbing away in the sick-room, perhaps from the very need of this refreshing and vivifying influence. How often is pure air, in connection with wholesome food, proper exercise, and cold water, and before them all, the sheet anchor of expiring hope. What

means shall we, in such cases, resort to, to supply, to invigorate, to preserve life in the still living body? This living, life-giving element, rightly called vital air, can alone give life to the living blood and the living tissues,

"Leben dem leben
Gibt er allein."

In no way, therefore, can the good physician do more to restore the sick to health again, especially in many of those cases which call for all the resources of his art, in no way can he confer a greater blessing upon his patient, than by seeing that this and the kindred duties of the nurse are faithfully attended to; by securing for his prostrated system the full influence of that great restorative which his Maker himself has provided for its necessities in such abundance; by calling down the fresh breezes of heaven to fan his brow, to play around his mouth, to reach the very citadel of life, carrying with them all their invigorating, and life-giving power.

BOND'S SPLINT FOR FRACTURES OF CARPAL EXTREMITY OF THE RADIUS.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—While in Philadelphia, a few weeks since, I was greatly interested in the examination of a new and ingenious splint for fractures of the lower end of the radius, the recent invention of my respected friend Dr. Henry Bond, of that city. Although this important addition in practical surgery has been favorably noticed in many American and English journals, and has been translated into the German language, while its advantages have been tested in the hospitals both here and abroad, to my surprise I have seen no detailed record of it in New England, the place, of all others, to experience its benefits. It is here that during the winter season fractures of the radius near its carpal extremity are more frequent, perhaps, than anywhere else. These fractures are especially vexatious to the surgeon, and tedious to the patient. Moreover, I believe the profession in New England will attest to the fact that more instances of incomplete union and deformity have occurred amongst us from this particular fracture, than from almost any other. Impressed, then, with the efficacy of this simple and beautiful contrivance to remedy an evil so serious and frequent in our community, I would call the earnest attention of the profession to it. I send you for examination the apparatus in question, together with some extracts from the original paper describing it, read by Dr. Bond before the College of Physicians of Philadelphia, at their stated meeting on the 2d of Dec. last, with the hope that it may lead to the speedy adoption of this splint in our hospital and private practice. Very truly yours, J. B. U.

31 *Chestnut street, Boston, Dec.*, 1852.

Says Dr. Bond, in the paper under consideration:—

"According to the statistics of M. Goyraud, these constitute one third of the whole number of fractures. Dupuytren assigns to them, if

not always the first, at least the second or third rank in point of frequency. Vidal declares that the fracture of the radius is certainly more frequent than that of any other bone. According to the reports of cases in the Hôtel Dieu, Paris, for four years, they constituted one tenth of all the fractures.

"The number of fractures treated in the Pennsylvania Hospital, from 1751 to 1800, was 197, of which 34 were of the arm, which is about 17 per cent, or a little more than one sixth. From 1800 to 1829, 868 fractures, of which 200 were of the arm, which is about 23 per cent. From 1830 to 1839 (ten years), 946 fractures (exclusive of a few cases of ununited fractures, where the part affected is not specified), of which 250 were fractures of the arm, which is more than 26 per cent. [See Amer. Jour. Med. Sciences, XXIII., 260; I. New Series, p. 324.] The statistics of the Pennsylvania Hospital do not furnish the desired information on this subject; for they only report the fractures of the arm, without even discriminating between the arm and the fore-arm. It is probable, however, that at least one eighth, if not one sixth, of the whole number were fractures of the radius.

"As to the success attending the treatment of fractures of the radius," continues Dr. B., "I have met with no statistical reports entitled to consideration, and I think we shall in vain search journals, hospital reports, monographs, and systematic works, for an accurate report of a series of such cases. There is good reason for this; for, as I believe, few or no practitioners could render such a report, if made with minute fidelity, as would be flattering to their skill, or speak well for the perfection of our art. According to my observation, there is no fracture, except the neck of the thigh bone, where there is so often a failure to accomplish a perfect cure, as that of the lower end of the radius."

"To show that I am not dealing in exaggerations, or offering opinions unsustained by the observations of others, I cite two very good American authorities. Dr. Peirson, in the work already referred to, says, 'Notwithstanding the greatest care in the adjustment and treatment of fractures of the fore-arm, many instances of deformity will occur. Our pathological museums present an immense variety of irregular consolidations of the radius and ulna, which must have seriously interfered, during life, with their appropriate functions.' In a very valuable paper of Dr. J. Rhea Barton, published in the Medical Examiner for 1840, he says, 'I do not know any subject on which I have been more frequently consulted than on deformities, rigid joints, inflexible fingers, loss of the pronating and supinating motions, and neuralgic complaints, resulting from injuries of the wrist and the carpal extremity of the fore-arm; one or more of these evils having been left, not merely as a temporary inconvenience, but a permanent consequence.'

"I propose to examine the mode of treating these fractures, as now commonly practised in our hospitals, and as taught by the most recent American and English authors.

"It is unnecessary to state in detail to the members of this College what this practice is. I may briefly say that it consists in the use of two long straight splints, with compresses or cushions, and bandages.

The palmar splint extends from the elbow down to the extremities of the fingers. Some, however, do not allow this to extend below the second joints of the fingers. The dorsal splint extends sometimes only to the extremity of the metacarpe. When this dressing is applied, the longitudinal access of the fore-arm will be continuous or parallel with that of the hand.

"There are several objections to this mode of dressing the fracture, which I will attempt to point out. In the first place, it violates what ought to be regarded as a surgical canon in the treatment of fractures, viz., to adopt such a position as will put all the muscles, acting on the part, as much in repose, as free from tension, as possible; so that the least counteracting force will be required. 2d. The constrained position of the hand demands tighter bandaging, in order to prevent derangement of the fragments by paralyzing or subduing the muscles that are rendered tense by the position assumed. 3d. This constrained position and tight bandaging greatly increase the danger of that protracted or permanent rigidity of the hand and fingers which is a too frequent result of these injuries. 4th. This mode of dressing, by long, straight splints, not only increases the danger that it will result in rigidity, but that, when it does occur, the hand will be left unsightly, inconvenient, or useless. 5th. There is another objection to it, which will be regarded by the surgeon as of more or less importance, according as he is actuated more or less by the feelings of humanity. I refer to the distress or discomfort which must result from a constrained position and the force applied to maintain it.

"The muscles that act on the hand are least tense, or most in repose, when the hand is inclined backwards, so that the metacarpe forms a considerable angle with the fore-arm, when it is also inclined inwards towards the ulnar side of the arm, and when the fingers are moderately flexed. In this case it will be perceived that the longitudinal axis of the fore-arm, if prolonged, would not correspond with that of the hand, but would pass through, or very near, the point where the thumb and index finger most easily and naturally meet. Thus in the innumerable manipulations with the thumb and fingers (as with a pen, pencil, button, needle, money, &c. &c.), their points most easily and naturally meet in this axis of the fore-arm. This will be found to be the position of the hand, when it hangs by the side with all the muscles relaxed.

"This consideration is of little comparative importance in the case of young persons, and of those who have followed no laborious handicraft; but to persons advanced in life, and to those whose muscles and joints have become rigid by hard labor, and to whom the hand is the means of subsistence, it is a point of very material importance. A large portion of these fractures occur among such patients. When such a hand is firmly swathed by a roller upon the long, straight, palmar splint, it is forced into a constrained position, and some of the muscles, acting on the fragments, are put into extreme tension. This condition of the muscles must act strongly on the fragments of the radius, and must tend strongly to derange them, especially when the fracture is oblique.

"To counteract this tendency to displacement of the fragments on account of the tense condition of the muscles, the bandage with the compresses must be applied so tightly as greatly to increase the risk of that frequent ill-success so well described by Dr. Barton.

"When the hand is placed in the position above described, so as to take off tension from all the muscles, there will be so little tendency to displacement of the fragments, that a very gentle pressure of compresses and bandages will be adequate to maintain them in their proper relation to each other. The dressing may be removed earlier, so as to give motion to the hand and fingers, without danger of producing derangement of the fragments, and the gentle pressure of the dressing will be less likely to deprive the tendons and sheaths of their lubricity, and thus to cause permanent adhesions.

"The importance of the position of the hand in the treatment of fractures of the radius has been fully recognized for a long time by eminent surgeons. In these cases, Mr. Cline did not allow the splints or the sling to extend below the wrist. His object was to let the hand, by its own weight, and without any impediment, incline towards the ulnar edge of the fore-arm; and, while the ulna acted as a counter-extending force, this inclination of the hand would prevent the fragments from overriding or overlapping each other, and make it very easy to keep them in apposition. He understood well the mechanism of this accident. When the radius alone is broken, the ulna affords all requisite counter-extension; and in proportion as the hand is inclined towards the ulna, will the lower fragments be drawn down, so that there will be hardly a chance for one fragment to overlap the other; certainly there will be little difficulty in keeping the fragments in apposition with very gentle means. But Mr. Cline's method of dressing, in order to accomplish the indication, was too indeterminate; he could not depend upon maintaining steadily the same degree of inclination of the hand, and one might suppose that there would be danger of producing artificial joints. Nevertheless, I am persuaded that, with Mr. Cline's method of treatment with short splints, there would be fewer cases terminating in deformity and loss of the use of the hand, than when the arm and hand are tightly swathed in long straight splints.

"I have attempted to devise a mode of dressing these fractures, having reference to the principles advanced in this paper, and that will meet the following indications:—

"1. To maintain such an inclination of the hand upon the fore-arm as shall most effectually relieve the muscles from tension, or put them in repose.

"2. To maintain the hand and fingers in a position that, if rigidity should result, the member shall be as little an incumbrance, and retain as many of its uses as possible.

"3. To make it easy of application, requiring no extraordinary skill or dexterity, and little liable to be deranged or displaced.

"4. To make the dressing easy and comfortable to the patient, while it does not lack efficiency.

"My own experience of its use, within the last three years, convinces

me that I have to some extent accomplished these indications. How far this shall be corroborated by others can be known only when others shall have had time, opportunity and disposition to test it.

"To enable others to test the principles herein maintained, in the mode of treating these fractures, I offer the following directions for preparing the dressing, with some explanations as to its application."

[The directions given by Dr. Bond for using the splint referred to, a specimen of which may be seen at the office of this Journal, we shall endeavor to find room for in another number.—Ed.]

CHRONIC LARYNGITIS.

To the Editor of the Boston Medical and Surgical Journal.

Sir.—The subject of this communication was a middle-aged lady, of strumous habit, who had been afflicted with dyspepsia and palpitations fourteen years, and with stricture of the œsophagus or at least with dysphagia ten years, during which period she swallowed only liquids or comminuted solids, and yet the occurrences of choking were frequent and alarming. Nearly a year since, she contracted, as she thought, a severe cold, which was attended with soreness in the throat and with hoarseness, and, at times, aphonia, which conditions have since continued without amendment. At the time of my first interview with the patient she was so feeble as to be unable to rise without assistance. There were several large glandular swellings upon either side of the neck, and when she swallowed there was acute pain in both ears. Her breathing was excessively difficult, the inspirations being long, stridulous and convulsive. Her countenance was sharp, pallid, and expressive of deep distress. She could not sleep; she and her friends asserted that she had not slept during an interval of four days. There was but slight cough, but there was a free secretion of mucus mingled with purulent matter. The epiglottis was distinctly visible; it was red, contracted and distorted, but no inspection could be had beyond it; no doubt, however, could be entertained that the disease, whatever might be its character, existed in the laryngeal cavity, and that it was unnecessary to pursue the pathological inquiry, inasmuch as she was in imminent danger of suffocation. The extremity of her distress suggested but one remedy, and the immediate application of that; I therefore gave my patient chloroform, and then carefully opening the upper rings of the trachea inserted a double Borgelat canula into the aperture. Its introduction caused violent convulsive cough and expulsion of bloody mucus, but this continued for a brief period only—then she breathed with unlimited freedom. The transition from suffocation to unspeakable relief was, I doubt, never more apparent. Her features settled directly into the placid stillness of death, which could not itself produce a change more remarkable or yet more sudden.

The benefits accruing from this measure were subsequently very manifest as far as respiration was concerned; she ever after breathed freely. The dysphagia, however, steadily increased, while the amount

of nutrition diminished in a corresponding ratio, until it ceased altogether. During the last eighteen days of her life she had lost the power of swallowing. She was therefore emaciated to the last degree, was partially delirious from insufficient sustenation, and she died at the expiration of the fourteenth week from the operation.

An examination revealed extensive ulceration and destruction of the larynx. The epiglottis was partially destroyed; the arytenoid cartilages and ligaments, in fact every distinct landmark of organization above the cricoid cartilage was totally destroyed; so that there was no trace whatever of the rima glottidis or chordæ vocales, and the boundaries separating the cavities of the larynx and trachea were wholly obliterated. The entire surface of the larynx was in a state of ulceration, and was studded with profuse vegetative growths or interstitial depositions. Small bony particles existed in the region of the cricoid cartilage, and one of the horns of the thyroid cartilage which was denuded was seen to be ossified. The anterior walls of the pharynx were destroyed, consequently this cavity and that of the larynx were united, and during the latter days of the patient's life the fluids she attempted to drink passed directly into the trachea and were regurgitated through the canula. The upper portion of the œsophagus was also ulcerated and its orifice very much contracted. The glandular swellings upon the neck were in a state of suppuration. The lungs were reduced to a mere handful, but there were no indications of softening; they were evidently in a condition of miliary tubercle. JAMES DEANE.

Greenfield. Dec. 20, 1852.

MEDICA SACRA—EMBALMING OF THE DEAD.

BY DR. THEOPH. RUBINSOHN.

[Continued from page 409.]

But if the body be preserved, the soul which dwelt in it during its life time, remains with it even after its death, and is freed from the penalty of transmigrating into the body of some beast. This notion of transmigration of the soul into animals, gave rise to the idea that the body should be preserved in its natural form; hence, also, the commiseration towards animals, because they were thought to be the owners of human souls, and hence, also, the custom of embalming the dead.

Herodotus describes the following methods of embalming. When one died, the persons who were engaged in the business of embalming exhibited to the relatives of the dead various patterns of wood, which were painted as a dead, embalmed corpse. One pattern was of the finest workmanship, and was called Osiris, a name which one was not permitted to pronounce; the second pattern they exhibited was not so fine nor so expensive; the third pattern was the cheapest. From these three patterns one was selected, and the parties made the bargain. The most expensive embalming cost one talent of silver, about $1000; the second, $300; and the third was considerably cheaper. The method of embalming was thus:—First they extracted the brain through the

nostrils with a hook, and filled the head with spices and groceries (*pharmaka*). The holy scribe (*hierogrammateos*) then made the sign upon the corpse where the cut for opening it should be made, which the "parachistes" executed by means of the Æthiopian stone, and escaped immediately, as the people threw stones after him, because they considered him who cuts a corpse to be worthy of their indignation and hatred. They then extracted the entrails (yet this was not a general practice), purged the abdomen with a kind of wine prepared from dates, filled it with spices bruised in water, put into it also myrrh, and the cut was sown together by means of a needle and thread. The corpse was then laid into nitrum (*nitron* or *litron*) where it remained for the space of seventy days. When these days were gone, the body was washed and swaddled in fine linen (*byssus*), dipped in gum. The relatives then took the body and deposited it in a coffin that was made in the figure of a man, and placed it in an upright position against the wall of a room appointed for that exclusive purpose.

The swaddling of the mummies was in the following manner—all mummies seeming to have been swaddled alike; the only difference was in the number of the cloths and their quality. The body is first dressed in a long shirt, which is tied on the back at the neck. The head is covered with a square napkin of fine materials, which covers also the face as with a mask. Frequently the face was covered with five or six such napkins, of which the first was painted, and represented the countenance of the embalmed body. Every part of the body was tied in separate cloths immersed in a kind of resin. The legs were tied together, the arms crossed on the chest and swaddled in long cloths which surrounded the whole body. The last cloths were painted with hieroglyphic figures, and fastened with long and symmetrically-crossing ribbons, which finished the swaddling. The mummy was then put into a sarcophagus, which had the form of a human figure. Wealthy persons used three coffins, one within another, the outer more sumptuous than the first ones. Kings were put into colossal sarcophagi of oriental granite, and hidden in the catacombs. The more humble classes embalmed their dead relatives in a less expensive manner.

In some mummies objects are found which seem to have reference to the business in which they were engaged during life. Mailet found in one mummy, strings of a musical instrument, from which he infers that the embalmed body was either a musician or a musical-instrument maker.

From what we have said, it is clear that the Egyptians manifested a great aversion against the opening of the dead, since they threw stones after the parachistes who cut the body for the sake of embalming it. They had, therefore, no opportunity of examining the entire structure of the human body, the position and connection of its individual parts in its regular or abnormal condition. The method of opening the corpse was crude, so that science could not profit from it; the brain was extracted through the nostrils with a bent hook! There are also many historical testimonies of the ignorance of the Egyptians in the elementary sciences of anatomy and physiology. They generally believed that the heart annually increased to the thirtieth year, and then decreased

in weight as much as it formerly increased, which was the natural consequence of death. It was also believed, that a nerve is extended from the fourth finger of the left hand to the heart, wherefore the religious custom was introduced to dip this finger in the wine at sacrifices. Manetho informs us that a certain king, Athollis or Athosthas, wrote anatomical books; but he lived, if at all, in the fabulous times, and some historians believe him to have been the Egyptian Hermes. Plinius, indeed, thinks that the Egyptian kings commanded that the dead should be opened, in order that the causes of death should be known; but it is probable that he refers to the Ptolemæan dynasty, in whose time the science of anatomy took its rise. The account of Plutarch, that the Egyptians used to place a "*skeletos*" in the rooms where they feasted, that the invited guests should remember that they will also die, should be understood in a figurative, not literal sense. Herodotus, who was an eye witness, says that it was a wooden image of a corpse that was placed in the dining saloon, to which the guests were shown, with the words—"Look at this, drink and be merry, for after your death you will be like this." Do not the words of the prophet Isaiah (xxii., 13) "Let us eat and drink, for to-morrow we die," refer to the same Egyptian custom?

OPERATIVE SURGERY ILLUSTRATED, BY R. U. PIPER, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

Many months since, the announcement was made in the Boston Medical and Surgical Journal, that a volume on operative surgery was soon to issue from the Boston press, which promised to be one of much value. As there are already so many standard works on the subject, and some, too, of the highest excellence, it was felt that a new one must possess uncommon merits and entirely new features in order to secure attention, and that the author must possess much confidence to justify the undertaking. We have accordingly waited and watched for the completion of this book, and for further notice of its character.

The *secular press* has advertised it as ready for sale, and has spoken of it in terms of much praise. The medical journals of New Hampshire, Buffalo, and Ohio, have given to it special notices, and have bestowed very flattering commendations, and urge it strenuously on the consideration and patronage of the medical profession. Why we should wait so long and go so far for testimonials of the work, is accounted for only, perhaps, by the fact that "A prophet is not without honor, save in his own country."

It is so seldom that works on either medicine or surgery issue from the Boston press, that the greater interest is produced when one does appear; and this interest is increased, too, by the fact that those which it has published have so uniformly proved works of standard merit. The volume under review, will do no discredit to this well-deserved reputation. Dr. Piper has presented us with a vast amount of information, in a form both "*available* and *cheap*," and in a shape most convenient for frequent and easy reference. Its title-page reads thus—"Ope-

rative Surgery Illustrated, containing more than *nineteen hundred* engravings, including *two hundred original* and fifty colored engravings; with explanatory text. By R. U. Piper, M.D. Also a chapter upon the use of ether in surgery, from the Transactions of the American Medical Association: written at the request of a surgical committee of that body, by Henry J. Bigelow, M.D., Professor of Surgery in the Medical School of Harvard University."

The book is a duodecimo, got up in the English style, on paper of extra fineness, and in the typographical execution is all that can be desired. It is designed for durability, and will never wear out. The plates are engraved on stone, but appear as if done on steel. They are withal the work of his own hands, and exhibit alike his artistic and professional skill. They owe much of their value to Dr. Piper's ability to make his own drawings. They are less elaborate and less *expensive* than copper-plate representations, but for *distinctness* and *accuracy* they are excellent. The whole range of surgery has been explored and the best authors have been laid under contribution to enrich the plates. Every department of and almost every conceivable case in surgery are represented. Ligature of arteries, application of bandages, removal of tumors, dislocations, fractures, amputations, &c. &c., are fully represented, also a great number of *special operations* are here for the first time delineated. With *nineteen hundred* engravings, it will be understood readily what variety and fulness could be combined.

The text is generally but a description of the plates, corresponding with the general design of the work, which is merely on *operative surgery*. The surgeon has only to turn to its pages to find ocular representations of any operation which he may need to perform. And for those residing in the country, whose libraries are necessarily small, Dr. Piper's book will be of great value, combining as it does the essential parts of many voluminous and more expensive works. To the young or inexperienced practitioner it will furnish concise information which he will often most need, and in case of sudden emergency will be a safe substitute for the advice and counsel of the more experienced. It is then the isolated physicians, those so often thrown on their individual and unaided resources, that the book will most benefit, and if we do not mistake it will not be long before another edition will be demanded. It will be gratifying, too, to the medical profession to know that a work on surgical anatomy is in a state of preparation by the same author.

The closing chapter on anæsthetic agents, by Professor Bigelow, their mode of exhibition and physiological effects, is one of much practical value; being concise and furnishing just that information needed to guide in the choice and administration of anæsthetic agents and in the management of the untoward symptoms which sometimes occur from their use.

A. Chapin.

Winchester, Mass., Dec., 1852.

FINCH'S OBSTETRICAL SUPPORTER.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—In your yesterday's Journal, under the Editorial head, and prefaced with a request that the queries be answered, I notice certain interrogatories respecting the practical utility of the instrument named above, answers to which are requested from disinterested practitioners.

As *I* am, in my own estimation at least, *one who knows*, and certainly *disinterested*, I will, with your leave, reply to your correspondent.

In your Journal for the 3d of November of the present year, may be found a slight description of the application and uses of this apparatus, which I wrote at your request; and since I have told your *anxious inquirer* that I have no interest in the *sale* of it, he *may* feel disposed to turn to the 297th page of the Journal and read for himself. I have now made use of the supporter for nearly three years, and find it to possess all the value and utility, and far more, that was represented when I purchased. Yet I would sincerely advise him who comes forth in the public journals and accuses the proprietor and vender, as well as your correspondent, with stating for facts, what "exists solely in the imagination," by all means *not* to purchase the supporter. If *he* does not possess sufficient knowledge of obstetrical practice to be able to perceive the applicability of this instrument, and to discriminate when, and in what cases, it would be of use, without relying upon the statements of those who either sell or use it—it certainly will be of no "practical utility" in his case.

In regard to the proprietor, and his method of bringing the instrument into notice, I have nothing to reply, as I suppose him to be fully able to justify himself. But I feel in justice bound to state that I have no knowledge of his feelings and wishes in regard to this matter—that I wrote the article on page 297, and am now writing this, without his knowledge—in short, that I have no acquaintance with him, except what resulted from a short visit at the time I purchased my supporter—but that I believe him utterly incapable of resorting to any improper mode of attracting attention to his apparatus.

What he who hides himself behind his fancied name of "Many Readers" refers to, when he speaks of *advertising*, I do not understand. I am now receiving regularly *nineteen* different journals devoted to the subject of medicine and the collateral sciences, published in the northern and middle States, and thus far I have never seen the supporter *advertised* in one of them; and although I carefully examine each No. of these journals, I do not now recollect that it has been noticed in the columns of but one besides the Boston Medical and Surgical Journal, and that incidentally.

If your correspondent will write to me, or to the Journal, giving his true name, I will gladly answer any inquiries he may make; either directly to him, or through your pages; but I do not feel disposed to pass by cowardly inuendoes and accusations of falsehood without some notice.

Respectfully yours, C. H. CLEAVELAND, M.D.

Waterbury, Vt., Dec. 30, 1832.

THE KOUSSO OR BRAYERA ANTHELMINTICA.

[Communicated for the Boston Medi. and Surgical Journal.]

THE following article on this celebrated anthelmintic is condensed principally from one in the American Journal of Pharmacy, for Oct., 1850.

Kousso is found in Abyssinia, where it has been long used as an anthelmintic. Bruce mentions it in his travels, and asserts that the Abyssinians "evacuate once a month a large quantity of worms." Dr. Bruyer, a French physician, resided a considerable time at Constantinople, and witnessed the valuable anthelmintic properties of the kousso, and himself cheerfully employed the remedy. The medicinal flowers are obtained from a tree which grows to about twenty feet in height, and which is found only on the highlands of Abyssinia, requiring an elevation of 6 to 7000 feet for its growth. They have an aromatic odor, which has been compared to the combined odors of tea, hops and senna leaves, and are of a greenish yellow tinge.

The enormous price at which kousso has been sold, and the very limited quantity which has made its appearance in the European marketsk, have led to its extensive adulteration. It is said that the powder of pomegranate bark has been sold for the genuine article in France. The only security, therefore, for the genuineness of kousso is to purchase only the flowers and powder them when wanted.

All modern travellers in Abyssinia are agreed as to the great success of this remedy in the natives of the country; and the experience of physicians in France, England, Germany and Switzerland, confirms the reports made by those who have seen the kousso used in its native country.

It sometimes excites a slight sensation of heat, nausea or even vomiting, creates thirst, and frequently, perhaps usually, a gentle action in the bowels. But the latter is commonly so slight that in a considerable number of cases it is necessary to follow its administration by a mild purgative. This appears to be the general testimony to the effects of the kousso; but Dr. Chabert says, in this Journal (May 5th, 1852), that three doses of ʒj. each produced on a patient of his, a powerful catharsis and evacuated a tape-worm almost entire, including the head. He says—"My object in giving kousso was, that as it is both cathartic and anthelmintic and very rapid in its cathartic powers, I judged it would expel the worm entire, as was the result." The doctor, however, employed other remedies in the same case, previous to giving the kousso, as he says that he had tried the kousso alone in some cases, but without success; but it admits of a doubt, from what has been said above of the adulterations practised in Europe, if he obtained the genuine and unadulterated kousso.

Dr. Wm. Wood gives an account in the London Lancet (see this Journal, March 19th, 1851), of a man confined in the Bethlehem Hospital on account of insanity, who became completely restored to his health and reason, after a tape-worm had been discharged by the administration of kousso.

Hitherto the great drawback to the use of kousso, has been its enor-

mous cost. M. de Hencourt has sold it at a guinea per ounce, and he was said to be the fortunate holder of 1400 pounds, which at the above rate would produce him $112,000. The very moderate price at which it is now offered in the state in which it was imported from its native country, by Messrs. Brown & Price of Salem (see advertisement), brings it within the means of all who are disposed to give it a trial.

Administration.—The dose for an adult varies from four to six drachms. In general half an ounce may be considered a dose for an adult. For children from 7 to 12 years, 160 grains; from 3 to 7 years, 120 grains; not exceeding 3 years, 60 grains. It should be taken in the morning fasting, and the last meal of the evening previous should be a slight one. The evacuation of the bowels, by a mild purgative or a clyster, is desirable. The powdered flowers are to be mixed with (for an adult) about ten ounces of lukewarm water, and allowed to infuse for about a quarter of an hour. A little lemon juice is then to be swallowed, and the infusion being stirred up, the whole is taken, liquid and powder, at two or three draughts, at short intervals, being washed down by cold water and lemon juice. To promote the operation, tea (with sugar or milk) may be taken. A dose of castor oil or a saline purgative should be administered in three or four hours if the remedy has not operated.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JANUARY 12, 1853.

Dr. Allen's Lecture at the Medical School of Michigan.—For the clear understanding of readers, it is proper to give the following condensed history of the Medical School of Michigan, before commenting upon the introductory discourse of one of its faculty.

"The origin of the Michigan University endowment dates as far back as March 26, 1804, when Congress reserved a township of land, in the Detroit land district, for the purposes of a University. May 20th, 1826, another township was reserved, in addition, for the same purpose. On the 23d June, 1836, the act of full conveyance to the State authorities became a law. During the same year (1836), the organic law of the State provided for the organization of the several departments of the University—that of Medicine and Surgery inclusive—upon a *free* basis.

"The lands donated to the State were carefully selected by competent commissioners, and have proved among the most valuable and saleable in the State, so that sufficient funds were speedily realized to erect commodious buildings, purchase a suitable library and apparatus, and provide instructers.

"The College of Arts and Sciences went into full operation in 1841, and has since been constantly engaged in the discharge of its important trust.

"The College of Medicine and Surgery was organized in 1849. The Class of the Session of 1849–50, numbered 91. That of the Session of 1850–1, numbered 157. The present year, thus far, the number in atten-

dance considerably exceeds that of the previous year, and new students are constantly arriving.

"The Annual Session commences on the first Wednesday in October, and closes the third Wednesday in April ensuing. Four lectures and recitations are conducted daily, except upon Saturdays, which latter are devoted to the hearing and criticism of theses. Thus the total number of lectures are seen to vary from 540 to 560 in each Session. This, however, is not the place for particulars."

As no person in his senses pretends to doubt the growing wealth and political importance of the western States, the stability and character of the medical institution of the Michigan University is pretty certain, especially as physicians and surgeons are to be educated in it without a fee. People will take gems when they are given without price, and who would refuse a professional education when offered for nothing? It has been one of the great embarrassments of many distinguished men in the United States, that they were poor, and therefore compelled to struggle through years of hardships for an education. Hereafter, at the west, they can simply ask and receive.

Dr. Allen in his address starts off with the old proposition—"all that a man hath will he give for his life." The lecture was exceedingly well liked, as appears by the fact that it has actually reached a second edition—an unparalleled circumstance in the history of professional performances of that description. A main feature in this popular discourse consists in a narrative of the origin of the institution, part of which we have quoted above. It is therefore an excellent circular to send abroad, because it answers questions and solves queries that very naturally arise in the minds of students as to the prospects and privileges of the school. There are some sentiments towards the close, indicative of the philosopher in the author, and much to be admired. Dr. Allen is a good writer. The literature of the lecture is rather more prominent than its science, and perhaps it was so designed by Dr. Allen. There is also some spirit in it. Any thing in the shape of an essay, that will keep an editor awake at half past eleven at night, may safely be denominated an energetic, original production.

Military Surgery.—Dr. Flint, a leading member of the faculty of the Kentucky School of Medicine, gave, in his late introductory lecture, one of the very best things, to our apprehension, his pen has produced. While it indicates the scholar, in the literary excellence pervading thirty-six pages, the man of science is also discernible. What are our old Atlantic border institutions of medicine coming to, if all the West and South conspire against them, not by force of arms, but by that far mightier power, the rivalry of a combined strength of intellect, which nothing can resist in a nation of independent thinkers? A few years ago, we used to hear of the incipient formation of here and there a new school; but they were so far off that it was never for a moment imagined that their influence would reach far beyond the boundaries of that circle of individual activity in which the originators of them were operating. But they have now become grown, and are in the process of still higher development, and actually becoming great medical centres, drawing to them students from every direction.

Dr. Flint has a clear perception of what is worth having or knowing in the profession to which his life has been devoted. Vigor of thought and

energy of style characterize his writings, and when his mind bends down to the consideration of operative surgery, he is in the best attitude for exhibiting advantageously the results of a life of useful industry. We therefore commend the discourse particularly to the reading of surgeons, both young and old. The first will be instructed, and the latter refreshed —and may Louisville prosper in all departments of science and industry, as it has in her two schools of medicine.

American Journal of Insanity. — The volume of this work for the new year commences auspiciously. The gem in the first number is an article on Institutions for the Insane in Prussia, Austria and Germany, by Pliny Earle, M. D., of New York, whose name is quite familiar to physicians of the United States. He not only presents an authentic catalogue of the asylums, which must be particularly useful for gentlemen desirous of exchanging documents with those having charge of them, but also as a reference in constructing tabular statements, and statistical memoranda. His comments are not voluminous, yet satisfactory to the reader. Then again, Dr. Earle's account is reliable. We have personally examined many of the establishments particularized in this article, and his comments, made in a plain, sensible way, recall many interesting circumstances connected with our visitations to those abodes of misfortune. The miscellaneous articles in this work are always interesting, and often curious.

Necrological Appearances of Southern Typhoid Fever in the Negro.— Our southern brethren are industrious men. They seem always to keep doing, and therefore admonish us, whenever we are disposed to be idle, by the force of example. Dr. H. A. Ramsay, of Columbia Co., Georgia, has sent forth a pamphlet on the subject of the "necrological appearances of southern typhoid fever in the negro, with hints upon its prophylaxis and therapeutic management, together with observations upon the mental and physical peculiarities of the Ethiopian—founded upon observational analysis and autopsal results in his normal and abnormal condition; exhibiting their probable relative influence in forming the character of the disease south, and the presumed establishment of its primary origin in the negro, upon physiological and pathological grounds." What an immense field for exploration!—and yet the whole is comprised within 24 pages. After the title are the following appropriate words — "*truth without fear.*" The examination after death was minutely conducted, and the record would satisfy any pathological inquirer. The gist of the whole is simply this, in the author's own words—viz., "that the typhoid fever at the south, particularly as it appears in the southern negro, is a disease *sui generis.*" Again—"When we look at the southern negro physically and intellectually, we find him emphatically dissimilar to his bipedal fellow of the white race." The reasonings that follow this proposition are ingenious, and indicate an honest determination to explain the difference between the two prominent varieties of men—the white and black. In short, the 13th, 14th and 15th pages have physiological interest, which no one north, at least, would feel authorized to controvert, as it is quite impossible that we should know as much of the negro, his habits, superstitions, and peculiarities, as those living with and among them. Towards the close, Dr. Ramsay becomes spirited in regard to northern notions and views of institutions at

the south, and finally expresses a hope that every school of medicine north, south and west, may establish chairs for the purpose of settling the question by anatomical investigations. "It is something painfully remarkable," he says, "that there should be no chairs of comparative anatomy in our most reputable schools in America, exhibiting the manifold differences of the two races in their anatomical structure, together with their ordinary and well-known peculiarities." Physicians should read this production.

Mortality of Boston for the last year.—We present below, and on the following page, tables showing the monthly deaths in the city of Boston, and the diseases which caused them, for the fifty-three weeks from Dec. 27, 1851, to Jan. 1, 1853. They are made up from the weekly reports in this Journal, and present, we believe, a correct abstract of the mortality of the city during the time specified, as shown in those reports. Some slight variations, however, will be found to exist between the figures in these tables, and those in the annual report of our accurate City Registrar, Mr. Simonds—soon to be published. One cause of these variations is, that the weekly reports, as furnished us for the Journal, are closed at 12 o'clock on Saturdays, after which deficiencies are sometimes made up by the Registrar, particularly in the diseases, some of which, being reported at first "unknown," are ascertained, from the physician in attendance or otherwise. The total number also of course varies, on account of 53 weeks being included in our table. The City Registrar makes the mortality for the year 1852 to be 3,736. This is a smaller number than for the year previous. Estimating the population to be something over 145,000, the deaths for the last year have been 1 in 40, or 2.57 per cent.

Monthly Summary of Deaths in Boston, from December 27, 1851, to January 1, 1853.
(For diseases, see next page.)

Months.	Deaths.	Males.	Females.	Ages.					Accidental.	Foreigners and their children born here.	Persons of Color.
				Under 5 years.	5 to 20 years.	20 to 40 years.	40 to 60 years.	Above 60 years.			
January	307	151	156	149	26	71	41	37	154	183	
February	252	122	130	126	24	50	43	24	102	130	
March	270	128	142	103	31	72	31	18	111	159	
April	319	157	162	153	38	78	45	37	147	172	
May	278	141	137	82	24	75	35	32	105	123	
June	252	140	112	88	24	54	34	29	94	128	
July	357	183	174	171	26	84	49	24	122	259	
August	468	247	221	248	30	64	35	21	137	236	
September	398	174	224	202	37	77	28	25	147	211	
October	363	201	162	141	30	93	45	37	150	213	
November	298	141	157	119	36	54	34	32	130	148	
December	286	188	102	157	32	83	48	33	147	253	
Total	3,736	1,852	1,884	1,570	368	861	449	342	1,598	2,221	

MARRIED,—J. D. Young, M.D., of Bath, Me., to Miss L. A. Benner.—Dr. David Hodges, of Paxton, to Miss E. F. Whiteley.—In Bridgewater, Jan. 4th, Joseph B. Fobes, M.D., of Hanover, to Martha P., daughter of Arcetas Fobes, of B.

DIED,—Dr. Wesselhoft, of the Brattleboro' Water Cure Establishment, at Leipsig, Germany. He had a partial apoplectic attack a year since, which seriously affected his mind, and his journey to Europe was undertaken in the Fall, in the hope of benefiting his health. His Water Cure Establishment is to be conducted by Mrs. Wesselhoft, under the supervision of experienced physicians.—At Salem, Mass., Dr. Henry Krause, a native of Germany.

Deaths in Boston—for the week ending Saturday noon, Jan. 8th, 72.—Males, 44—females, 28. Accidental, 1—inflammation of the bowels, 2—inflammation of brain, 1—burns, 2—consumption, 10—convulsions, 3—croup, 9—dropsy, 1—dropsy in head, 1—infantile, 5—erysipelas, 2—scarlet fever, 9—gravel, 1—hooping cough, 1—disease of the heart, 2—disease of the hip, 1—intemperance, 2—inflammation of the lungs, 7—disease of liver, 3—marasmus, 2—measles, 1—old age, 1—palsy, 2—pleurisy, 1—unknown, 2.

Under 5 years, 46—between 5 and 20 years, 6—between 20 and 40 years, 13—between 40 and 60 years, 4—over 60 years, 3. Born in the United States, 56—Ireland, 14—England, 1—Prussia, 1. The above includes 5 deaths at the City Institutions.

Table of Deaths in Boston from Saturday noon, Dec. 27, 1851, to Saturday noon, Jan. 1, 1853.

Diseases.	Jan.	Feb.	Mch.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Abscess	1	1		2			3		1		1	1	10
Accidental	6	3	3	4	1	8	7	8	8	10	8	9	77
Anemia			2									1	3
Angina pectoris				1									1
Apoplexy	3	2	2	2	2	2	1	2	1	2	3	1	23
Artery, ossification of											1		1
Do. rupture of											1		1
Asthma	1									1			3
Bones, disease of											1		1
Bowels, "	1	2	1	3	3		12	9	3	3			37
Do. inflammation of	4	4	2	2	2	5	27	29	5	9	2	5	110
Do. ulceration of										1			1
Brain, congestion and inflammat'n of	2		3	2	6	2	7	6	3	5	7	9	50
Do. disease of	1	8	3	11	6	4	2	6	3	4		1	45
Bronchitis	6	1	1	1					1		4		14
Burns and scalds	2	1	1	1		2	2	4		2		6	21
Cachexia								1					1
Calculus and gravel		1					1		1				3
Cancer	3	2	1	6	2	1	4	3	3	2	2	2	31
Canker													
Catarrh				1									1
Chloric ether, inhalation of								1					1
Cholera infantum							12	25	242	9	1		59
Cholera morbus							3	2		2	1		11
Colic								1			1	1	3
Concussion		1											1
Consumption	30	36	60	70	53	41	59	43	40	24	34	35	465
Convulsions	12	7	4	13	8	19	18	7	8	20	19	10	145
Croup and quinsy									4				4
Cyanosis							2						2
Cyanche maligna										1			1
Debility and exhaustion	31	7	2	10	5	1	8	8	6	11	13	22	116
Delirium tremens							1		1				2
Dentition	2	2	2	4	1	3	1	2	2	2	4		25
Diabetes	1	1								1			3
Diarrhœa	3	3	1	1	1	2	7	21	15	2	1	2	59
Dropsy	9	5	3	6	3	3	3	5	8	8	8	5	62
Drowned		2	3	1	6	2	2	3	2	2	1		26
Dysentery	3	3	2	4			10	30	33	22	7		114
Dyspepsia	1							1					2
Epilepsy				2							1		3
Erysipelas	2	1	4	1	2	1	3		3		1	1	18
Fever	3	1		1	1	1	2			2	2	5	18
Do. bilious							1			1			2
Do. intermittent								1					1
Do. scarlet	5	2	2	6	8	25	21	40	19	29	37	35	251
Do. typhoid	13	2	2	3	1	4	3	2	7	10	8	12	76
Do. typhus	11	4	4	6	3	2	3	4	2	2	7	2	52
Fracture									1				1
Gangrene	1		1		1			1	1	1	1	1	8
Hæmaturia		1											1
Hæmorrhage	1	2	3		1				1	1	1	1	11
Head, dropsy in	11	13	9	17	8	11	11	17	8	13	11	13	151
Heart, disease of	8	6	4	12	8	9	5	3	3	9	10	9	96
Hernia				1									1
Hip, disease of			1			1					1		3
Homicide	2					1			1				4
Hooping cough	7	5	10	7	2	2	1	2	2	5	1	8	52
Infantile diseases	38	20	22	17	22	15	35	51	30	21	22	14	357
Influenza	1		1		1				1				4
Intemperance	1	1	4	1	3		2		3	3	2	2	22
Intussusception							1						1
Jaw, necrosis of	1												1
Kidneys, disease of										1	1		2
Liver, disease of	1	1	7	1	1		2	3	3	3	5	2	28
Lungs, congest'n and inflammat'n of	15	18	26	31	24	9	11	9	8	9	15	37	237
Malformation										1			1
Mania						1			1	2		1	5
Marasmus	7	7	6	9	3	6	11	17	13	3	8	3	93
Measles	1	3	1	3	2	4	3	1		2	1	4	25
Neuralgia	1	1	1	1	1							1	6
Œsophagitis, disease of												1	1
Old age	6	3	4	8	6	12	9	3	6	10	8	7	82
Palsy	4	2	2	6	5	3	3	1	3	3	2	3	33
Pectoritis			1						1				2
Pleurisy	1	1	1	7		2				5	3	4	24
Poison		1										1	2
Puerperal diseases	8	6	2	3	1	5	3	5	6	7	1	4	51
Purpura									1	2			3
Rheumatism	2	4		4	2	1	3	4	1	2		1	23
Scald head					1								1
Scrotula	1	2	1			3	3	1	5	2	3	3	24
Smallpox	6	2		2									10
Spine, disease of	1		1	2	4		1	1		1		1	12
Stomach, inflammation of						1							1
Suicide	1				2	2				1			6
Syphilis	1			1						1			3
Teething	8	10	10	10	3	7	10	26	27	11	7	7	131
Tetanus							1						1
Throat, disease and inflammation of	2		2	1	1		1	1	1	1		1	10
Thrush		1	2	3	2	1	3	7	1	2	2	3	27
Tumor		1	1		1	1	3		3		1	4	15
Ulcer			1		1								2
Unknown	4	4	3	4	3	5	7	5	2	7	5	9	58
Worms		2	2				2	1	3		2		12
													3,737